

## ABSTRACT

A bandpass filter bandpass-filters an inputted signal X to pass therethrough a partial band of a band of the inputted signal X, and a level correlated white noise generator circuit generates a white noise signal having a level changing according to a level of the inputted signal and correlated to the inputted signal. A signal processing circuit executes a signal processing that includes a predetermined bandpass filtering processing, an echo adding processing, and a level adjustment processing, and that multiplies the inputted white noise signal by a predetermined transfer function, and outputs a processed white noise signal to an adder. The adder adds up the white noise signal from the signal processing circuit and the inputted signal X, and outputs a band-extended signal having an addition result, as an outputted signal.